

WHAT IS CLAIMED IS:

1. An injector system comprising:
a syringe comprising:
a body portion; and
a plunger movably disposed within the body portion; and
an injector comprising:
a housing defining a front opening therein;
a drive member extendible through the front opening of the housing for imparting motive force to the plunger disposed within the syringe; and
a pressure jacket assembly associated with the housing for substantially enclosing the syringe during an injection procedure, the pressure jacket assembly comprising:
a jacket cylinder having an open front end for receiving the syringe and a rear end associated with the housing; and
at least one front member associated with the housing, the at least one front member pivotable between a closed position for retaining the syringe within the jacket cylinder and an open position for allowing the syringe to be inserted into and removed from the front end of the jacket cylinder, the at least one front member engaging the syringe to retain the syringe within the jacket cylinder.
2. The injector system of Claim 1 wherein the at least one front member comprises two front members associated with the housing, the two front members cooperating to retain the syringe within the jacket cylinder.
3. The injector system of Claim 1 wherein the at least one front member defines a slot for receiving a flange disposed on the syringe.
4. The injector system of Claim 1 wherein the syringe further comprises a neck portion and a transition region interconnecting the body portion and the neck portion.

5. The injector system of Claim 4 wherein the syringe further comprises at least one flange member projecting from at least a portion of the transition region.

6. The injector system of Claim 5 wherein the at least one flange member comprises two flange members.

7. The injector system of Claim 5 wherein the at least one flange member comprises an alignment flange.

8. The injector system of Claim 4 wherein the transition region has a conical shape.

9. The injector system of Claim 4 wherein the transition region is tapered between the body portion and the neck portion.

10. The injector system of Claim 4 wherein the neck portion comprises a luer connector at a tip thereof.

11. An injector system comprising:
a syringe comprising:
a body portion; and
a plunger movably disposed within the body portion; and
an injector comprising:
a housing defining a front opening therein;
a drive member extendible through the front opening of the housing for imparting motive force to the plunger disposed within the syringe; and
a pressure jacket assembly associated with the housing for substantially enclosing the syringe during an injection procedure, the pressure jacket assembly comprising:

a jacket cylinder having an open front end for receiving the syringe and a rear end associated with the housing;

at least one support member comprising a front end and a rear end, the rear end of the at least one support member being associated with the housing; and

a front member associated with the front end of the at least one support member, the front member pivotable between a closed position for retaining the syringe within the jacket cylinder and an open position for allowing the syringe to be inserted into and removed from the front end of the jacket cylinder, the front member engaging the syringe to retain the syringe within the jacket cylinder.

12. The injector system of Claim 11 wherein the body portion of the syringe defines a fluid outlet and the front member defines a slot therein for receiving the fluid outlet when the front member is in the closed position.

13. The injector system of Claim 11 wherein the at least one support member comprises two support members.

14. The injector system of Claim 13 wherein each of the two support members comprises a front end associated with the front member and a rear end associated with the housing.

15. The injector system of Claim 11 wherein the at least one support member comprises a rod member.

16. The injector system of Claim 11 wherein the syringe further comprises a neck portion and a transition region interconnecting the body portion and the neck portion.

17. The injector system of Claim 16 wherein the syringe further comprises at least one flange member projecting from at least a portion of the transition region.

18. The injector system of Claim 17 wherein the at least one flange member comprises two flange members.

19. The injector system of Claim 17 wherein the at least one flange member comprises an alignment flange.

20. An injector system comprising:

a syringe comprising:

a body portion defining a fluid outlet; and

a plunger movably disposed within the body portion; and

an injector comprising:

a housing defining a front opening therein;

a drive member extendible through the front opening of the housing for imparting motive force to the plunger disposed within the syringe; and

a pressure jacket assembly associated with the housing for substantially enclosing the syringe during an injection procedure, the pressure jacket assembly comprising:

a jacket cylinder having an open front end for receiving the syringe and a rear end associated with the housing;

a first support member comprising a front end and a rear end, the rear end of the first support member being associated with the housing;

a second support member comprising a front end and a rear end, the rear end of the second support member being associated with the housing; and

a front member associated with the front ends of the first and second support members, the front member defining a slot therein and being pivotable between a closed position for retaining the syringe within the jacket cylinder and an open position for allowing the syringe to be inserted into and removed from the front end of the jacket cylinder, the slot being adapted to receive the fluid outlet of the syringe when the front member is in the closed position.